

**REMARKS**

Claims 1, 3-5, 8-10 and 12 are pending in the application with Claims 1 and 8 in independent form. No claims are amended, cancelled or withdrawn in the present Response.

Claims 1, 3-5, 8-10 and 12 stand rejected under 35 U.S.C. §103(a) as unpatentable over United States Patent No. 6,013,682 to Dalle et al. (the '682 patent) in view of Lochhead, Robert Y., "Encyclopedia of Polymers and Thickeners for Cosmetics," Cosmetics and Toiletries, 108 (1993) (Lochhead et al.). Claims 1, 3-5, 8-10 and 12 also stand rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 6,143,310 to Sang et al. (the '310 patent) in view of the '682 patent.

With respect to the '682 patent, the Examiner contends that the '682 patent discloses a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units. The organosilicon polymer is prepared by mixing a dimethylvinylsiloxyl terminated polydimethylsiloxane, an organohydrogenpolysiloxane having the average formula  $\text{Me}_2\text{HSiO}(\text{Me}_2\text{SiO})_{20}\text{SiMe}_2\text{H}$ , platinum in a platinum catalyst, an emulsifier, and water. However, the Examiner admits that the '682 patent fails to disclose an oil that is liquid at room temperature and that does not contain hydrosilation reactive groups, as claimed in the present application. Therefore, to address this deficiency of the '682 patent, the Examiner relies on Lochhead et al. and contends that Lochhead et al. discloses dimethicone, which is an oil that is liquid at room temperature and does not contain hydrosilation reactive groups, as a conventional ingredient in cosmetic compositions. Thus, the Examiner contends that it would be obvious to

incorporate the dimethicone of Lochhead et al. into the silicone emulsion containing cosmetic composition of the '682 patent.

With respect to the '310 patent, the Examiner contends that the '310 patent discloses cosmetic compositions comprising a continuous oil phase that may include cyclic dimethylsilicone, linear polydimethylsiloxanes and polydimethylphenylsiloxane, which are liquids at room temperature and do not contain hydrosilation reactive groups. The Applicants respectfully point out that polydimethylsiloxane, as disclosed in the '310 patent, is the same compound as dimethicone, which is disclosed in Lochhead et al. Thus, the '310 patent and Lochhead et al. are utilized by the Examiner for the same purpose, and the Examiner correlates each to Component (B) of the present claims. Notably, however, the Examiner admits that the '310 patent fails to disclose the use of a linear organosilicon polymer with a main chain composed of diorganosiloxane units and alkylene units, as claimed in the present application. Therefore, to address this deficiency of the '310 patent, the Examiner relies on the '682 patent for the purposes described above. As such, the Examiner is using both Lochhead et al. and the '310 patent for the same purpose in each of his rejections, i.e., each is combined with the '682 patent. For the reason set forth below, as well as the reasons set forth in Paragraphs 12-21 of the attached Declaration, the Applicants respectfully disagree that an aqueous emulsion comprising (A) a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units and (B) an oil that is a liquid at room temperature and does not contain hydrosilation-reactive groups, as claimed in the present application, is obvious in view of the '682 patent, the '310 patent, and/or Lochhead et al. either alone or in combination.

More specifically, although the '682 patent discloses an organosilicon polymer and the '310 patent and Lochhead et al. disclose silicone oils, respectively, there is no reason whatsoever that one of skill in the art would expect the advantageous physical properties obtained from an aqueous emulsion including (A) a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units and (B) an oil that is liquid at room temperature and does not contain hydrosilation-reactive groups in a ratio of Component (A) to Component (B) of from 1:0.5 to 1:50. The Examiner is respectfully reminded that "[e]vidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut prima facie obviousness." MPEP § 716.02(a). In addition, "[e]vidence that a compound is unexpectedly superior in one of a spectrum of common properties . . . can be enough to rebut a prima facie case of obviousness." *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987)

In particular, as clearly evidenced by the Examples of the present application, as well as paragraphs 13-15 of the attached Declaration, the aqueous emulsion claimed in the present application has excellent and unexpected physical properties. For example, in Examples 1-3 of the '682 patent, an organosilicon polymer is formed from mixing a dimethylvinylsiloxyl terminated polydimethylsiloxane, an organohydrogenpolysiloxane having the average formula  $\text{Me}_2\text{HSiO}(\text{Me}_2\text{SiO})_{20}\text{SiMe}_2\text{H}$ , platinum in a platinum catalyst, an emulsifier, and water. Similarly, in Comparative Example 1 of the present application, an organosilicon polymer is formed from dimethylvinylsiloxyl terminated dimethylpolysiloxane, dimethylhydrogensiloxyl terminated dimethylpolysiloxane, a surface active agent, a platinum catalyst, and water. Thus,

Examples 1-3 of the '682 patent correspond with Comparative Example 1 of the present application. As set forth in Table 1 of the present application, the mixture of Comparative Example 1 was not homogenous and its viscosity could not be measured via a rotary viscometer.

Conversely, in Practical Example 1 of the present application, an organosilicon polymer is formed from dimethylvinylsiloxyl terminated dimethylpolysiloxane, dimethylhydrosiloxyl terminated dimethylpolysiloxane, a surface active agent, a platinum catalyst, and water. An emulsion is formed from this organosilicon polymer and a triethylsiloxyl terminated dimethylpolysiloxane in water. The emulsion was homogenous and had excellent dispersibility in water, as set forth in Table 1. Thus, Table 1 of the present application illustrates the advantages and surprising results of forming an aqueous emulsion including (A) a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units and (B) an oil that is liquid at room temperature and does not contain hydrosilation-reactive groups (corresponding to Practical Example 1) as compared with an emulsion of merely a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units (corresponding to Comparative Example 1 of the present application and Examples 1-3 of the '682 patent).

In addition, in Comparative Example 4 of the present application, an emulsion was formed from a trimethylsiloxyl terminated dimethylpolysiloxane, a surface active agent, and water. The trimethylsiloxyl terminated dimethylpolysiloxane is an oil that is liquid at room temperature and does not contain hydrosilation-reactive groups, i.e., corresponds to component

(B) of the present application. The emulsion was not homogenous and had an undesirable dispersibility in water, as set forth in Table 1.

As set forth in paragraph 16 of the attached Declaration, it is clear that there is no reason whatsoever that one of skill in the art would combine the emulsion of Comparative Example 1 of the present application, which corresponds to the '682 patent, with the emulsion of Comparative Example 4 of the present application, which corresponds to the '310 patent and/or Lochhead et al. Because the physical properties of each respective emulsion are undesirable, there is no reason whatsoever that one of skill in the art would expect a mixture of (A) a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units and (B) an oil that is liquid at room temperature and does not contain hydrosilation-reactive groups to have excellent physical properties, as claimed in the present application.

In addition, as clearly evidenced by the Examples of the present application, as well as paragraphs 17-19 of the attached Declaration, the cosmetic composition claimed in the present application has excellent and unexpected physical properties. In particular, in Practical Examples 7 and 8, the aqueous emulsions of Practical Examples 1-4 were applied onto skin and utilized as a hair treatment, respectively. As set forth in Table 2, the aqueous emulsions of Practical Examples 1-4 had, when applied onto skin, excellent smoothness and no sensation of tackiness. In addition, the aqueous emulsions of Practical Examples 1-4 had, when utilized as hair treatment, excellent adhesion to hair as well as excellent smoothness and moistness.

Conversely, the emulsion of Comparative Example 1, which did not include Component (B) of the present application, had no smoothness when applied onto skin. In addition, the

emulsion of Comparative Example 1 had merely half of the adhesion to hair as the aqueous emulsions of Practical Examples 1-4. Finally, the emulsion of Comparative Example 1 had undesirable smoothness and moistness when utilized as a hair treatment.

Further, the emulsion of Comparative Example 4, which did not include Component (A) of the present application, had undesirable smoothness and tackiness when applied onto skin. In addition, the emulsion of Comparative Example 4 had merely half of the adhesion to hair as the aqueous emulsions of Practical Examples 1-4. Finally, the emulsion of Comparative Example 4 had no moistness and undesirable smoothness when utilized as a hair treatment.

Thus, as set forth in paragraph 20 of the attached Declaration, because the physical properties of emulsions formed from either Component (A) or Component (B) of the present application had undesirable properties, there is no reason whatsoever that one of skill in the art would expect an emulsion including Components (A) and (B) to have excellent physical properties. There is nothing in the '682 patent, the '310 patent, or Lochhead et al. that teaches the advantages of an aqueous emulsion including both (A) a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units and (B) an oil that is liquid at room temperature and does not contain hydrosilation-reactive groups.

Therefore, as clearly evidenced in paragraphs 16, 20, 21, and 23 of the attached Declaration, even after closely analyzing the '682 patent, the '310 patent, and Lochhead et al., one of skill in the art would have no reason whatsoever to expect the physical properties obtained from an aqueous emulsion of (A) a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units and (B) an oil that is liquid at room

temperature and does not contain hydrosilation-reactive groups, or the physical properties obtained from cosmetic compositions including such aqueous emulsions, as claimed in the present application.

In view of the foregoing, the Applicants respectfully submit that claim 1, as well as claims 3-5, 8-10, and 12 that depend from claim 1, are both novel and non-obvious over the prior art including over the '682 patent, Lochhead et al., and/or the '310 patent. As such, the Applicants submit that the claims are in condition for allowance and respectfully request such allowance.

The proper fee for a Petition for a One Month Extension of Time is included herewith. While it is believed that no additional fees are presently due, the Commissioner is authorized to charge the Deposit Account No. 08-2789, in the name of Howard & Howard Attorneys PLLC for any fees or credit the account for any overpayment.

**Respectfully submitted,**

**HOWARD & HOWARD ATTORNEYS PLLC**

March 26, 2009  
Date

/David M. LaPrairie/  
**David M. LaPrairie, Registration No. 46,295**  
450 West Fourth Street  
Royal Oak, Michigan 48067  
(248) 723-0442